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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hyeoun-Joo So

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KED & ASSOCIATES, LLP

P.O. Box 221200

Chantilly, VA 20153-1200

EXAMINER

LEE, JUSTIN YE

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/743,296	<b>Applicant(s)</b> SO, HYEOUN-JOO	
	<b>Examiner</b> Justin Y. Lee	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-7,9,16,19,20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,9,16,19,20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/08 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For the limitation “a processing device to separately perform a cell search for each service vendor”, the specification of the current application doesn't have such teachings. The Examiner is reading this limitation as all of the service vendors are searched, but each of the service vendors are

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searched separately. But the Examiner only finds in the specification of the current application that the cell search is performed on one of the service vendors as called "each service vendor" in the specification. Please advise if the claim is interpreted wrong and also provide the parts in the specification which have the support for the Applicant's way of interpretation.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-2, 5-7, 9, 16, 19-20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 16 recites the limitation "service vendors" in lines 5 and 7 of claim 1 and lines 5 of claim 16. There is insufficient antecedent basis for this limitation in the claim. The "service vendors" should be changed to "the service vendors".

Claims 1 and 16 recites the limitation "each service vendor" in lines 9 and 12 of claim 1 and lines 6-8 of claim 16. The "each service vendor" should be changed to "each of the service vendors" and the "each of the service vendors" should be "the each of the service vendors".

Claims 1 and 16 recites the limitation "the respective service vendor" in lines 9, 11 and 13-15 of claim 1 and lines 9 of claim 16. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2, 5-7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnan (US 2002/0168976 A1) in view of Van de Berg (US 6,615,043 B1) and further in view of Chao et al. (US 2005/0153696 A1).

Regarding claim 1, Krishnan discloses a frequency searching method comprising:

receiving system information from a network (the system information is received in form of static table 110, which is transferred from a base station to the device 100 - page 3, paragraph 0027, lines 32-38) (the system information or static table 110 includes roaming list and lookup table - paragraph 0014), wherein the received system information comprises frequency information of service vendors (Krishnan, e.g. "Airtouch" or "Sprint" - paragraph 0009) (the SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective frequency/channel (220), as exhibited in Figure 3; therefore, the received system information relates to frequency bands of use for each of the service vendors) (system information/static table

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110 includes usage frequency/block or channel number which is indicative of frequency of transmission/usage frequency - paragraph 0010); and

obtaining usage frequencies (220) of service vendors (e.g. "Airtouch" or "Sprint"- paragraph 0009) from the received system information (system information/static table 110 includes usage frequency/block or channel number which is indicative of frequency of transmission/usage frequency - paragraph 0010) (because SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective frequency/channel (220), as exhibited in Figure 3; therefore, each of the obtained frequencies correspond to a frequency band of use for respective service vendors as claimed); and

storing the obtained usage frequencies of service vendors in memory of user equipment (paragraph 27, stored in memory 108 of device 100).

Krishnan does not disclose for each service vendor, performing a cell search of the respective service vendor by scanning the stored usage frequencies and then by scanning a frequency band allocated to the respective service vendor, wherein the cell search for each service vendor is performed about the stored usage frequencies of the respective service vendor and then about all frequency bands allocated to the respective service vendor when a requested frequency is not found when searching the stored frequencies of the respective service vendors.

Van de Berg further discloses for each service vendor, performing a cell search of the respective service vendor by scanning the stored usage frequencies and then by

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scanning a frequency band allocated to the respective service vendor, wherein the cell search for each service vendor is performed about the stored usage frequencies of the respective service vendor and then about all frequency bands allocated to the respective service vendor when a requested frequency is not found when searching the stored frequencies of the respective service vendors (col. 5, lines 11-19 and 42-46, sub-carriers in the list 111 stored in memory 109 is first scanned and if not successful a full scan of all possible sub-carriers is performed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of van de Berg into the teachings of Krishnan for the purposes of efficiency in finding a carrier frequency from a large number of possible carrier frequencies (col. 1, lines 7-10 and col. 7, lines 24-26).

Krishnan and Van de Berg do not disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network.

Chao et al. further disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network (paragraph 20 and 13-16, broadcast control channel system information is received from UTRAN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Chao et al. into the teachings of Krishnan and Van de Berg for the purposes of reducing UE processing/battery consumption (paragraph 41).

Regarding claim 2, Krishnan and Van de Berg and Chao et al. disclose everything claimed as applied above (see claim 1). In addition, the system information (static table / roaming list / lookup table) is received by a mobile communication terminal (device 100) from the network (base station) (Krishnan, paragraph 0027, lines 32-38).

Regarding claim 5, Krishnan and Van de Berg and Chao et al. disclose everything claimed as applied above (see claim 1). In addition, receiving the system information comprises receiving the system information in a system information block (Krishnan, the explained table is a system information block - paragraph 0027, lines 32-38).

Regarding claim 6, Krishnan and Van de Berg and Chao et al. disclose everything claimed as applied above (see claim 5). In addition, transmitting the system information block including the usage frequency of each service vendor (Krishnan, e.g. "Airtouch" or "Sprint" - paragraph 0009).

Consider claim 7. Chao et al. further disclose wherein the system information is received from the network through a broadcast control channel (paragraph 20 and 13-16, system information is transmitted in a broadcast control channel).

Regarding claim 9, Krishnan and Van de Berg and Chao et al. discloses everything claimed as applied above (see claim 1). In addition, updating stored frequencies based on the received system information from the network (Krishnan, paragraph 0027, lines 32-38).



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8. Claims 16, 19-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnan (US 2002/0168976 A1) in view of Van de Berg (US 6,615,043 B1) and further in view of Chao et al. (US 2005/0153696 A1).

Regarding claim 16, Krishnan discloses a mobile communication apparatus (device 100- Figure 2; paragraphs 0025-0027) comprising:

a receiving device (receiver 104 - Figure 2) to receive system information (the system information is received in form of static table 110, which is transferred from a base station to the device 100- page 3, paragraph 0027, lines 32-38) (the system information or static table 110 includes roaming list and lookup table- paragraph 0014), wherein the received system information comprises frequency information of service vendors (Krishnan, e.g. "Airtouch" or "Sprint" - paragraph 0009) (the SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for respective frequency/channel (220), as exhibited in Figure 3; therefore, the received system information relates to frequency bands of use for each of the service vendors) (system information/static table 110 includes usage frequency/block or channel number which is indicative of frequency of transmission/usage frequency - paragraph 0010); and

a memory (memory 108 - Figure 2) to store (paragraph 0027) usage frequencies of service vendors obtained from the received system information and a frequency band allocated to each service vendor (e.g. "Airtouch" or "Sprint" - paragraph 0009) (the SID and NID identify respective service vendors, e.g. "Airtouch" or "Sprint", as disclosed in paragraph 0009, and the system information/static table 110 includes SID and NID for

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respective frequency/ channel (220), as exhibited in Figure 3; therefore, the received system information relates to frequency bands of use for each of the service vendors); and

Krishnan does not disclose separately perform a cell search for each service vendor, wherein the cell search for each service vendor is performed by scanning the stored usage frequencies and then by scanning a frequency band allocated to the respective service vendor, wherein the processing device performs the cell search of a specific service vendor about the stored usage frequencies of the specific service vendor, and then performs the cell search about all frequency bands allocated to the specific service vendor when a requested frequency is not found when searching the stored frequencies of the specific service vendor.

Van de Berg further discloses separately perform a cell search for each service vendor, wherein the cell search for each service vendor is performed by scanning the stored usage frequencies and then by scanning a frequency band allocated to the respective service vendor, wherein the processing device performs the cell search of a specific service vendor about the stored usage frequencies of the specific service vendor, and then performs the cell search about all frequency bands allocated to the specific service vendor when a requested frequency is not found when searching the stored frequencies of the specific service vendor (col. 5, lines 11-19 and 42-46, sub-carriers in the list 111 stored in memory 109 is first scanned and if not successful a full scan of all possible sub-carriers is performed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of van de Berg into the teachings of Krishnan for the purposes of efficiency in finding a carrier frequency from a large number of possible carrier frequencies (col. 1, lines 7-10 and col. 7, lines 24-26).

Krishnan and Van de Berg do not disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network.

Chao et al. further disclose the system information is received from the network through a Radio Resource Control of a UMTS Terrestrial Radio Access Network (paragraph 20 and 13-16, broadcast control channel system information is received from UTRAN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Chao et al. into the teachings of Krishnan and Van de Berg for the purposes of reducing UE processing/battery consumption (paragraph 41).

Regarding claim 19, Krishnan and Van de Berg and Chao et al. discloses everything claimed as applied above (see claim 16). In addition, the receiving device receives the system information in a system information block (Krishnan, the explained table is a system information block - paragraph 0027, lines 32-38).

Consider claim 20. Chao et al. further disclose wherein the receiving device receives the system information is received from the network through a broadcast

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control channel (paragraph 20 and 13-16, system information is transmitted in a broadcast control channel).

Regarding claim 22, Krishnan and Van de Berg and Chao et al. discloses everything claimed as applied above (see claim 16). In addition, the processing device updates stored frequencies in the memory based on received system information from the network (Krishnan, paragraph 0027, lines 32-38).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Y. Lee whose telephone number is (571) 272-5258. The examiner can normally be reached on M - Thu 9:30 to 8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 5712727687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Lee  
AU 2617  
11/18/08

/Alexander Eisen/  
Supervisory Patent Examiner, Art Unit 2617